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## A NEW FISH OF THE GENUS *PUNTIVUS* HAMILTON (OSTARIOPHYSI : CYPRINIDAE) FROM GOA<sup>1</sup>

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(With two plates)

Among the live fish exported from India for the pet trade is one popularly called indigo barb (*Barbus narayani*). It is conjectured that this fish may have been identified as such due to its colour resemblance to *Puntius narayani*, recorded by Hora in 1937 from the Cauvery river in Coorg. On closer inspection, it was found that the indigo barb is actually a new species. We are naming it *Puntius setnai*. [Raj Tilak (1969) did not come across this species in Goa.]

*Puntius setnai* sp. nov.

**Specimens studied:** Holotype; total length 47 mm, standard length 35.5 mm, from Sanguem, Goa. Paratypes; 24 exs. 40 to 57 mm total length, from clear streams in Sanguem and Ponda, Goa. The holotype and some of the paratypes will be deposited with the Zoological Survey of India, Calcutta.

**Diagnosis:** This species can be distinguished by (1) absence of barbels, (2) last undivided ray of dorsal fin osseous and serrated, (3) complete lateral line, (4) 20 scales along

lateral line and (5) two vertical dark bands on the body (during life).

## DESCRIPTION

D. 3/8, P.1/12-14, V. 1/8, A. 2/5, C. 19.  
L.1. 20 (17-22); l. tr. 5/3-4.

Head and body compressed, belly rounded. Dorsal and ventral profiles greatly arched, the former more so than the latter. Head short, conical. Eyes lateral. No tubercles on cheek and snout. Barbels absent. Dorsal fin inserted slightly nearer tip of snout than caudal base. Last unbranched ray of dorsal fin osseous and serrated. Caudal fin forked, lobes more or less equal, slightly pointed, about twice longer than median rays. Lateral line complete, typically perforating 20 scales. It runs horizontally up to the posterior border of the first dark band, then dips down and, at the seventh scale, again runs horizontally in a gentle arc to the tail. PDS 7, circumpeduncular  $1\frac{1}{2}$  5  $1\frac{1}{2}$ .

**Morphometry:** (of holotype, all measurements in millimetres) Total length 47, standard length 35.5, body depth 15.33, head length 9.67, head depth 8.33, predorsal length 19.95, post-dorsal length 20.84, pre-pelvic length 20.40, preanal length 28.0, length of caudal

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peduncle 5.83, depth of caudal peduncle 6.0, snout length 1.92, eye diameter 3.92, dorsal fin length 5.83, dorsal fin depth (damaged) 7.0 (?), pectoral fin length 8.50, pelvic fin length 8.50, anal fin depth 7.50, anal fin length 5.17, caudal fin length 10.44.

Depth of head in head length (HL) 1.16, snout in HL 5.04, eye diameter in HL 2.47, predorsal/post-dorsal length 0.96, HL in standard length (SL) 3.67, body depth in SL 2.32, length of anal fin in SL 6.87, length of caudal peduncle in SL 3.40, depth of caudal peduncle in SL 5.92, length of body cavity in SL 2.10, predorsal length in SL 1.92, prepelvic length in SL 1.84, postorbital length in SL 6.80, caudal peduncle depth/caudal peduncle length 1.03.

**Colouration:** During life, the general body colour is olive grey. Two vertical dark, oval bands are prominent but do not extend up to the ventral border (Plates 1a, 2a). The first is narrow and covers scales 3, 4 and the front margin of scale 5. The second dark band is more rounded, occurs above the posterior part of the anal fin and covers scales 16, 17. In addition, there is a faint grey elongated patch below the rear portion of the dorsal fin which covers scales 10, 11 and a small portion of scale 9. On both sides of the rear dark band, the body is creamy white. In the breeding season, the whole body in the male acquires a golden yellow sheen. All the fins are colourless and transparent. (In the colour plate, the fins appear black because the fish was photographed against a black background. Similarly, the white on the body is due to reflection of light of the electronic flash from the body.)

**Sexual dimorphism:** In adult males, the dorsal fin is suffused with red, while the pelvic fins are edged on the outer side with white.

**Colour after long preservation:** The pale grey patch on the body below the rear portion of the dorsal fin turns very dark, so that the fish appears to have three dark bands (Plate 2b). The body changes colour from olive grey

to orange brown.

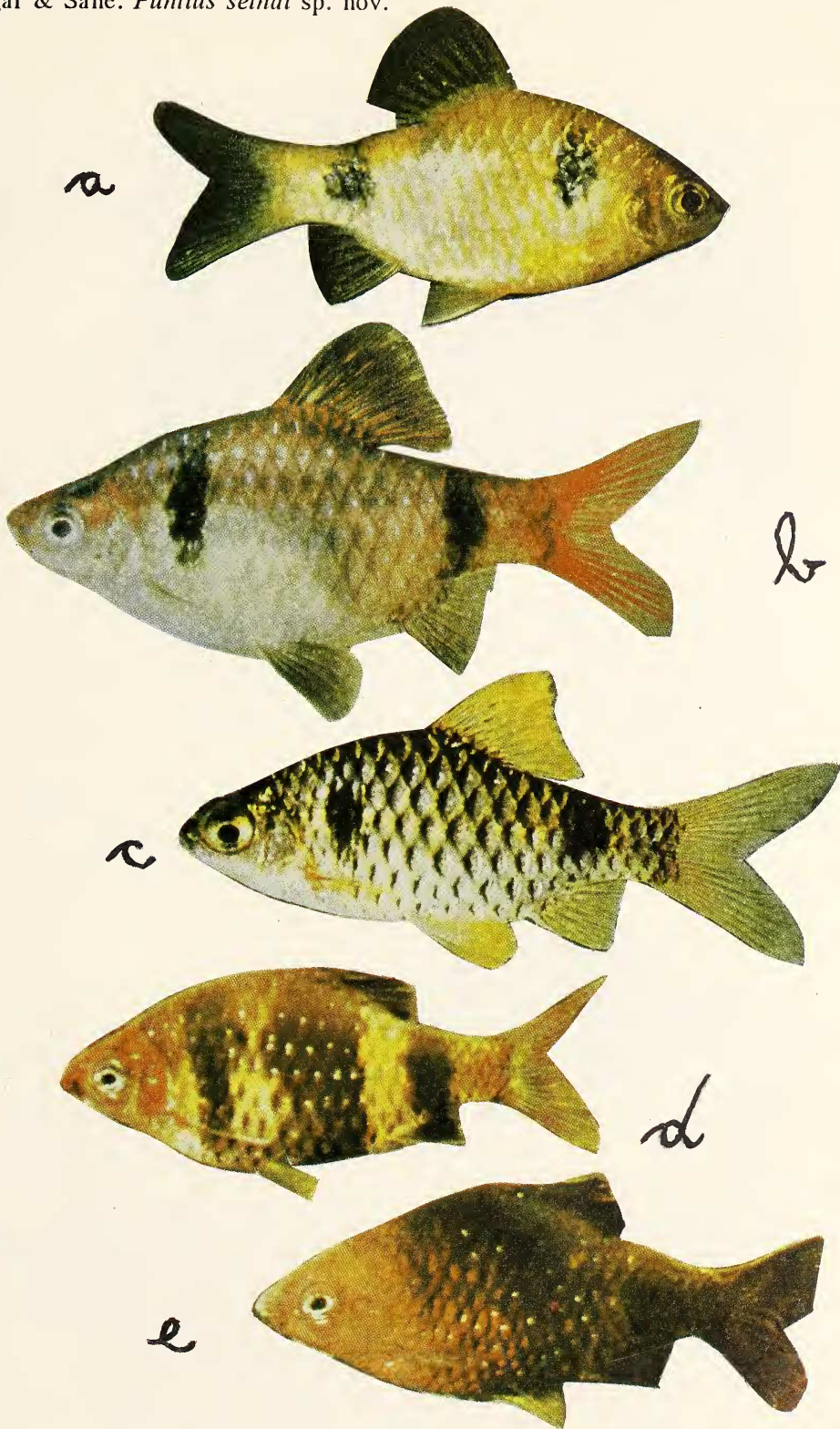
**Etymology:** The new species is named after late Dr S.B. Setna, first Director of Fisheries of the erstwhile Bombay State, whose dynamism led to the establishment of a separate Department of Fisheries, which was prior to 1945, only a Section of the Industries Department.

#### DISCUSSION

Several barbs have two dark spots or bands on the body. Three species that closely resemble *Puntius setnai* sp. nov. are *Puntius cuningii* (Gunther 1868) (Plates 1c, 2c) from Sri Lanka, *P. bandula* Kottelat & Pethiyagoda (Plate 1b), also from Sri Lanka, and *P. narayani* Hora (Plate 2d) from Coorg (Karnataka). *Puntius bandula* has an incomplete lateral line, and the rear dark band reaches up to the ventral border of the body. Moreover, the dorsal, anal and pelvic fins are black. In *P. cuningii*, too, the lateral line is incomplete, and each scale has a black border in front. The dorsal and pelvic fins of specimens from northern Sri Lanka are reddish, while those from the south have yellowish fins. In *P. narayani*, the last unbranched ray of the dorsal fin is a weak, articulated spine.

Since the light grey patch between the two dark bands in *Puntius setnai* sp. nov. darkens after long preservation, this fish then has the appearance of having three dark bands. Females and juvenile males of *Puntius nigrofasciatus* (Gunther) from Sri Lanka also have three bands, but their body height is greater compared to *P. setnai* sp. nov. Each scale has a central silvery white spot, and the three dark bands extend completely from the dorsal border down to the ventral border (Plate 1d). Males in the breeding season (Plate 1e) develop a crimson red colouration over the body and caudal fin. This varies in intensity and, in males in full breeding fervour, the entire body may become almost a uniform black, with just a trace of crimson (Plate 1e). The dorsal, pelvic and anal fins in the male are smoky grey.





a. *Puntius setnai* sp. nov. (see text for explanation of true colours); b. *P. bandula*; c. *P. cuningii*;  
d. *P. nigrofasciatus*, female; e. *P. nigrofasciatus*, male in breeding livery.